

IN THE CLAIMS

1. (Currently Amended) A product-on-demand delivery system for agricultural product, the system comprising:
 - a frame;
 - a main hopper mounted on the frame, said main hopper having a nozzle assembly into which product in said main hopper is directed, the nozzle assembly having an upstream sidewall, a downstream sidewall and a bottom, the nozzle assembly comprising an air inlet and a product outlet;
 - a primary application unit and a secondary application unit mounted to the frame, each application unit provided with an auxiliary hopper and a product meter for dispensing the product to a field, each product meter in communication with the auxiliary hopper;
 - a splitter ~~fitting~~ having a splitter inlet, a first splitter outlet and a second splitter outlet, said second splitter outlet oriented for a vertical upward flow of air and product;
 - a primary product hose flow-coupled to said product outlet and to said splitter inlet;
 - a secondary product hose flow-coupled to said primary product hose and to said secondary application unit;
 - said first splitter outlet flow-coupled to said primary application unit;
 - an air pump pneumatically ~~coupled~~ flow-coupled to the upstream sidewall of the nozzle assembly by an air supply hose, the air pump generating pressurized air directed into the air supply hose;
 - the air supply hose ~~having an air inlet that is coupled to~~ being flow-coupled to said air inlet of the nozzle assembly opposite the product outlet, so that product located in the nozzle assembly is taken up by the air stream as the air stream

passes from the air inlet of the air supply hose through the nozzle assembly to the product outlet, and the air and product passes through the primary product supply hose, through the splitter fitting to the primary application unit and through the splitter fitting and through the secondary product supply hose to the secondary application unit, air and product supplying both said primary and secondary application units passing through said primary product hose.

2. (Original) A product-on-demand delivery system as defined by claim 1, wherein said second splitter outlet is arranged to direct flow therethrough in a direction having a velocity vector at an obtuse angle with respect to a velocity vector of flow through said splitter inlet.

3. (Currently Amended) A product-on-demand delivery system as defined by claim 2, wherein ~~the nozzle assembly is provided with a plurality of baffles, the baffles extend between and above the air inlets of the air supply hoses and the respective product outlets of the product hoses, wherein gaps are formed between adjacent baffles~~

the nozzle assembly comprises a baffle, the baffle extending between and above the air inlet and the product outlet of the nozzle assembly.

4. (Currently Amended) A product-on-demand delivery system as defined by claim 3, comprising an agitator assembly located in the nozzle assembly for agitating product located in the nozzle assembly, wherein the agitator assembly is provided with a plurality of fingers that are movable to agitate product within said nozzle assembly ~~extend into the gaps formed between adjacent baffles.~~

5. (Currently Amended) A product-on-demand delivery system as defined by claim 3, comprising an agitator assembly located in the nozzle assembly for agitating product located in the nozzle assembly, wherein the agitator comprises a transverse rod that is located above the baffles, the transverse rod having ~~the a~~ a plurality of fingers extending radially outward from the ~~transversely-extending~~ transverse rod, wherein the ~~transversely-extending~~ transverse rod is rotated back and forth so that the plurality of fingers agitate the product located in the nozzle assembly.

6. (Currently Amended) A product-on-demand delivery system for agricultural product, said system comprising:

an implement frame that can be transported through a field;

a main seed hopper mounted on the frame, the main hopper having a nozzle assembly into which product in the main hopper is directed by gravity, the nozzle assembly having an upstream sidewall with an air inlet thereon, a downstream sidewall and a bottom;

a plurality of planting units are mounted to the frame, each planting unit is provided with a seed meter for metering seed and a furrow opener for forming a planting furrow into which metered seed is deposited, wherein a first planting unit of said plurality of planting units comprises a first seed meter that is flow-coupled to the main seed hopper by a primary product supply hose, coupled that is flow-coupled to the downstream sidewall of the nozzle assembly, wherein a second planting unit of said plurality of planting units comprises a second seed meter that is flow-coupled to the primary product hose by a secondary product hose that branches from the primary product hose, said secondary product hose branches from the first primary product hose at an angle such that the a flow velocity vector through the primary :

product hose at the an intersection of primary and secondary product hoses is at an obtuse angle to the a flow velocity vector of product through the secondary product hose at the intersection of the primary and secondary product hoses;

an air pump pneumatically ~~coupled~~ flow-coupled to the nozzle assembly by an air supply hose, the air pump generates an air stream that is directed into the air supply hose, the air supply hose ~~has an air inlet that is coupled to~~ being flow-coupled to said air inlet on the upstream sidewall of the nozzle assembly opposite the ~~product outlet of the product supply~~ primary product hose, so that the air stream passes from the air inlet ~~of the air supply hose,~~ through the nozzle assembly, to the ~~product outlet of the product supply~~ primary product hose ~~through the nozzle assembly,~~ so that seed located in the bottom of the nozzle assembly is taken up by the air stream and is directed through the primary product supply hose to the secondary first seed meter, and from the secondary product ~~supply~~ hose to the second seed meter.

7. (Currently Amended) A product-on-demand delivery system as defined by claim 6, wherein ~~each planting unit is provided with an auxiliary seed hopper located between the product inlet and each seed meter~~

said first planting unit comprises a first auxiliary seed hopper flow-coupled between the primary product hose and said first seed meter; and

said second planting unit comprises an auxiliary seed hopper flow-coupled between the secondary product hose and said second seed meter.

8. (Currently Amended) A product-on-demand delivery system as defined by claim 7, wherein the nozzle assembly comprises a product outlet, wherein said primary product hose is connected to said product outlet, and a baffle extending

between and above the air inlet and the product outlet so that the air stream from the air supply hose pass beneath the baffle ~~is provided with a plurality of baffles corresponding to the number of application units, the baffles extend between and above the air inlets of the air supply hoses and the respective product outlets of the product hoses so that the air streams from the air supply hoses pass beneath the baffles, wherein gaps are formed between adjacent baffles.~~

9. (Currently Amended) A product-on-demand delivery system as defined by claim 8, wherein said secondary product ~~supply~~ hose extends substantially vertically at said intersection of said primary and secondary product hoses.

10. (Currently Amended) A product-on-demand delivery system as defined by claim 9, wherein an agitator assembly is located in the nozzle assembly for agitating seeds located in the nozzle assembly, wherein the agitator comprises a transverse rod that is located above the baffle ~~baffles~~, the transverse rod having ~~the~~ a plurality of fingers extending radially outward from the ~~transversely extending~~ transverse rod, wherein the plurality of fingers are transversely aligned on the ~~transversely extending~~ transverse rod, and wherein the ~~transversely extending~~ transverse rod is rotated back and forth so that the fingers agitate the product located in the nozzle assembly.

11. (Currently Amended) A product-on-demand delivery system for agricultural product, said system comprising:

an implement frame that can be transported through a field;

a main seed hopper mounted on the frame, the main seed hopper having a nozzle assembly with a concave bottom and an upstream sidewall and a

downstream sidewall, the upstream sidewall and the downstream sidewall are outwardly diverging from one another, product in the main hopper is directed to the bottom of the nozzle assembly by gravity, the upstream sidewall having an air inlet and the downstream sidewall having a product outlet;

a plurality of planting units are mounted to the frame, each planting unit is provided with an auxiliary hopper, a seed meter and a furrow opener for forming a planting furrow into which metered seed is deposited;

a plurality of ~~splitter fittings~~ splitters each having one splitter inlet, a first splitter outlet and a second splitter outlet, each second splitter outlet of said splitters ~~splitter fittings coupled~~ flow-coupled to an inlet end of a secondary product hose and each first splitter outlet ~~coupled~~ flow-coupled to an auxiliary hopper, one splitter inlet ~~coupled~~ flow-coupled to a product the product outlet that is coupled to the downstream sidewall of the nozzle assembly, and remaining splitter inlets each ~~coupled~~ flow-coupled to an outlet end of a secondary product hose of a splitter fitting that is upstream in a product flow direction;

an air pump is pneumatically ~~coupled~~ flow-coupled to the nozzle assembly by an air supply hose, the air pump generates an air stream that is directed into the air supply hose, said air supply hose ~~has an air inlet that is coupled to~~ is flow-coupled to said air inlet on the upstream sidewall of the nozzle assembly opposite the product outlet, so that the air stream passes from the air inlet ~~of the air supply hose~~ through the nozzle assembly and through the product outlet, so that seed located in the bottom of the nozzle assembly is taken up by the air stream and is directed through the product outlet ~~supply hose~~ to said one splitter inlet.

12. (Currently Amended) A product-on-demand delivery system as defined by claim 11, ~~wherein~~ wherein each second splitter outlet is arranged to direct flow

therethrough in a direction having a velocity vector at an obtuse angle with respect to a velocity vector of flow through said respective splitter inlet, and each second splitter outlet oriented for a vertical upward flow of air and product.

13. (Currently Amended) A product-on-demand delivery system as defined by claim 11, wherein

the nozzle assembly comprises a baffle that extends between and above the air inlet and the product outlet so that the air stream from the air supply hose passes beneath the baffle

~~the nozzle assembly is provided with a plurality of baffles, the baffles extend between and above the air inlets of the air supply hoses and the respective product outlets of the product hoses so that the air streams from the air supply hoses pass beneath the baffles, gaps are formed between adjacent baffles.~~

14. (Currently Amended) A product-on-demand delivery system as defined by claim 11, wherein an agitator assembly is located in the nozzle assembly for agitating seeds located in the nozzle assembly, wherein the agitator assembly comprises a ~~transversely extending~~ transverse rod ~~located above the baffles~~, the ~~transversely extending~~ transverse rod having a plurality of fingers, the plurality of fingers extend radially outward from the rod ~~into~~ to reach seed located in the nozzle assembly ~~the gaps formed by the adjacent baffles.~~

15. (Currently Amended) A product-on-demand delivery system for agricultural product, said system comprising:

a frame;

a main hopper mounted on the frame, the main hopper having an air nozzle to which product in the main hopper is directed, an air stream through said air nozzle entraining product therein ;

a splitter ~~fitting~~ having a splitter inlet and ~~two~~ first and second splitter outlets, said splitter inlet communicating with said nozzle;

a primary product hose and a secondary product hose;

said primary product hose flow-coupled to said splitter inlet;

a primary application unit and a secondary application unit, both mounted to the frame, ~~each application unit is provided with a product meter for applying the product to a field,~~ said primary application unit comprising a first product meter for applying the product to a field, said first product meter ~~a first product meter of said primary application unit is coupled~~ being flow-coupled to the nozzle by said primary product supply hose, said splitter inlet and said first splitter outlet; and

said secondary application unit comprising a second product meter for applying the product to the field, said second product meter of said secondary application unit is coupled being flow-coupled to the primary product supply hose by said secondary product hose connected thereto at ~~an outlet branch~~ said second splitter outlet, ~~said outlet branch~~ second splitter outlet connected at an angle to the ~~splitter inlet~~ primary product conduit such that a product flow velocity vector in the ~~splitter inlet~~ primary product supply hose at said outlet branch is at an obtuse angle to a flow velocity vector of product flowing through said second splitter outlet ~~outlet branch~~.

16. (Currently Amended) A product-on-demand delivery system as defined by claim 15, wherein said ~~outlet branch~~ second splitter outlet is oriented for a vertical upward flow of air and product.

17. (Currently Amended) A product-on-demand delivery system as defined by claim 15, wherein

said primary application unit comprises a first auxiliary hopper flow-coupled between said first splitter outlet and said first product meter; and

said secondary application unit comprises a second auxiliary hopper flow-coupled between said secondary product hose and said second product meter each application unit is provided with an auxiliary hopper located between the product supply hose and the product meter.

18. (Currently Amended) A product-on-demand delivery system as defined by claim 15, wherein an agitator assembly is located in the main hopper for agitating product located in the main hopper, and wherein the agitator comprises a transverse rod, the transverse rod having the plurality of fingers extending radially outward from the ~~transversely extending~~ transverse rod, wherein the ~~transversely extending~~ transverse rod is rotated back and forth so that the fingers agitate the product located in the main hopper..